



From the FSRM Director

Welcome to the belated 2020 Summer issue of the FSRM newsletter. It is my great pleasure to share with you the latest news and activities of the program. The program is in a healthy state, even during the difficult time of COVID-19 pandemic.

First, I would like to introduce Professors Cun-Hui Zhang and Sijian Wang, the new co-directors of the program. I have stepped down as the director on July 1 to serve as the Chair of Department of Statistics. As you can see from their profiles featured in this letter, Professors Zhang and Wang are world renowned scholars and dedicated teachers. I am confident that the program under their guidance will be even more successful. Professor Zhang has been involved with FSRM since its inception and has taught FSRM courses many times. He was featured in our 2014 newsletter and his profile is copied here.



I would like to congratulate our Class of 2020 January and May graduates -- there are 22 of them. Due to pandemic, the May graduation ceremony was held online and we did not have our traditional graduate dinner. Nevertheless, we are proud of the achievements accomplished during their studies during the past two years. We wish them the best of luck towards the next stage of their career.

We also welcome the 20 new students who joined us this Fall 2020. Due to pandemic, they are all taking classes remotely and some of them are in New Jersey and some of them are in faraway places such as China and India. Our traditional orientation also moved online - we do miss the picnic and food truck we usually had after the orientation.

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Again, we welcome the new students and we are sure they will receive the same quality of education in the new temporary remote environment and we look forward to seeing them on campus once the pandemic is over. In this issue we feature the orientation held last fall (2019) for class 2021. Looking at the pictures, we realize how much fun we had in the normal times and how much damage the pandemic had on our lives.

We had the honor of having several excellent practitioner seminar speakers in the last year. They included thought leaders from Société Générale, Two Sigma Investments, and New York Life Investments. Their interesting, insightful, and informed presentations were well received by our students. We will also profile in this issue current student Xinyu Wei and alumnae TLyn Washington (FSRM 2017).

I hope you will enjoy reading this newsletter. As always, we welcome any comments and suggestions you may have, and will be glad to hear any news from you. Please keep sending us your feedback and please follow our newly launched social media accounts. I wish you and your families all the best and am looking forward to a new exciting academic year.

Faculty Profiles: New Co-Director - Cun-Hui Zhang



Professor Cun-Hui Zhang is a prolific researcher who has contributed in many areas of statistics, including statistical inference with high-dimensional data, tensor time series, penalized least squares and compressed sensing, matrix and tensor completion, empirical Bayes, de-convolution, wavelet signal processing, shape constrained inference, functional MRI, microarray data, network tomography, semiparametric and nonparametric methods, survival analysis, sequential analysis, and probability theory. His work impacts a broad range of applications, including financial data. Professor Zhang is a fellow of the Institute of Mathematical Statistics and of the American Statistical Association. His research has been supported by the National Science Foundation and other government agencies.

Professor Zhang has been involved with the FSRM program since its inception. He has taught FSRM535 Advanced Statistical Methods in Finance. According to Professor Zhang “The course covers important fundamentals in financial statistics. The students are intelligent and highly motivated. It is a real joy to teach this class and guide the students in preparation for successful careers in financial industry.”

Faculty Profiles: New Co-Director – Sijian Wang



Sijian Wang is an associate professor of statistics at Rutgers University. He earned his PhD from the University of Michigan and wrote his dissertation on high dimensional survival analysis. He is broadly interested in complex data analytics, predictive analysis, and data-driven decision making, and has broad experience in applying these methods and ideas to real data and practical problems.

Professor Wang approaches teaching from a pragmatic perspective: he believes in emphasizing concepts, and he tailors his curriculum to introduce students to classical and cutting-edge ideas that are relevant in industrial and business applications. He aims to give students good instincts and intuitions for when and how to apply the best available models and methods. His favorite part of teaching in the MSDS program is the diversity in working experience of the student body. He sees teaching as a two-way street, and always looks forward to learning about interesting ideas and applications from his students.

In his free time, Professor Wang enjoys playing tennis, listening to music, and reading books. He is eager for the new season of *West World* to start.

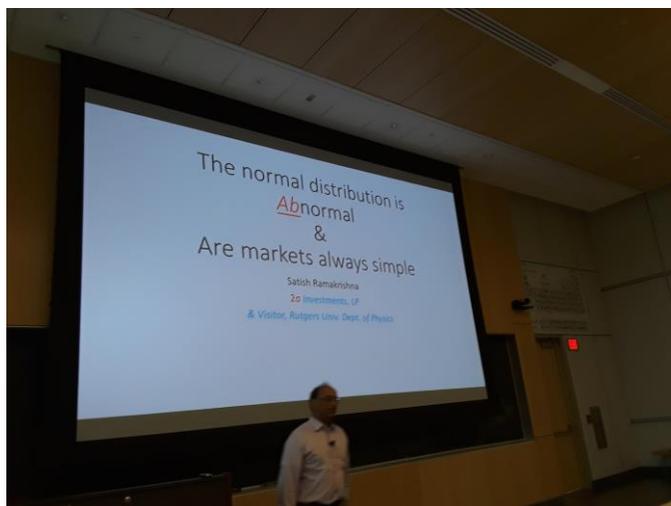
Practitioner Seminar Series



Didier Blanchard - Société Générale's Head of Enterprise Risk Management for the Americas

The FSRM program hosted Didier Blanchard, Managing Director and Head of Enterprise Risk Management for the Americas at Société Générale. He gave a lecture on the search for comprehensive, objective, and predictive risk management across the entire enterprise. He discussed how gaps in coverage, cognitive biases, and reactivity rather than anticipation are often frequent weaknesses of many risk models. He also addressed comprehensive risk identification and risk analytics. As for data science, he talked about increased predictiveness and warned about pitfalls of overconfidence (spurious modeling) and stress tests using global predictive modeling. He emphasized how it is important to solve well-defined issues with the right tools.

Practitioner Seminar Series



Satish Ramakrishna - “The normal distribution is Abnormal”

The FSRM program hosted Satish Ramakrishna, PhD the Chief Risk Officer at **Two Sigma Investments, LP** who gave a stimulating seminar on non-normality in the "real" world of finance.

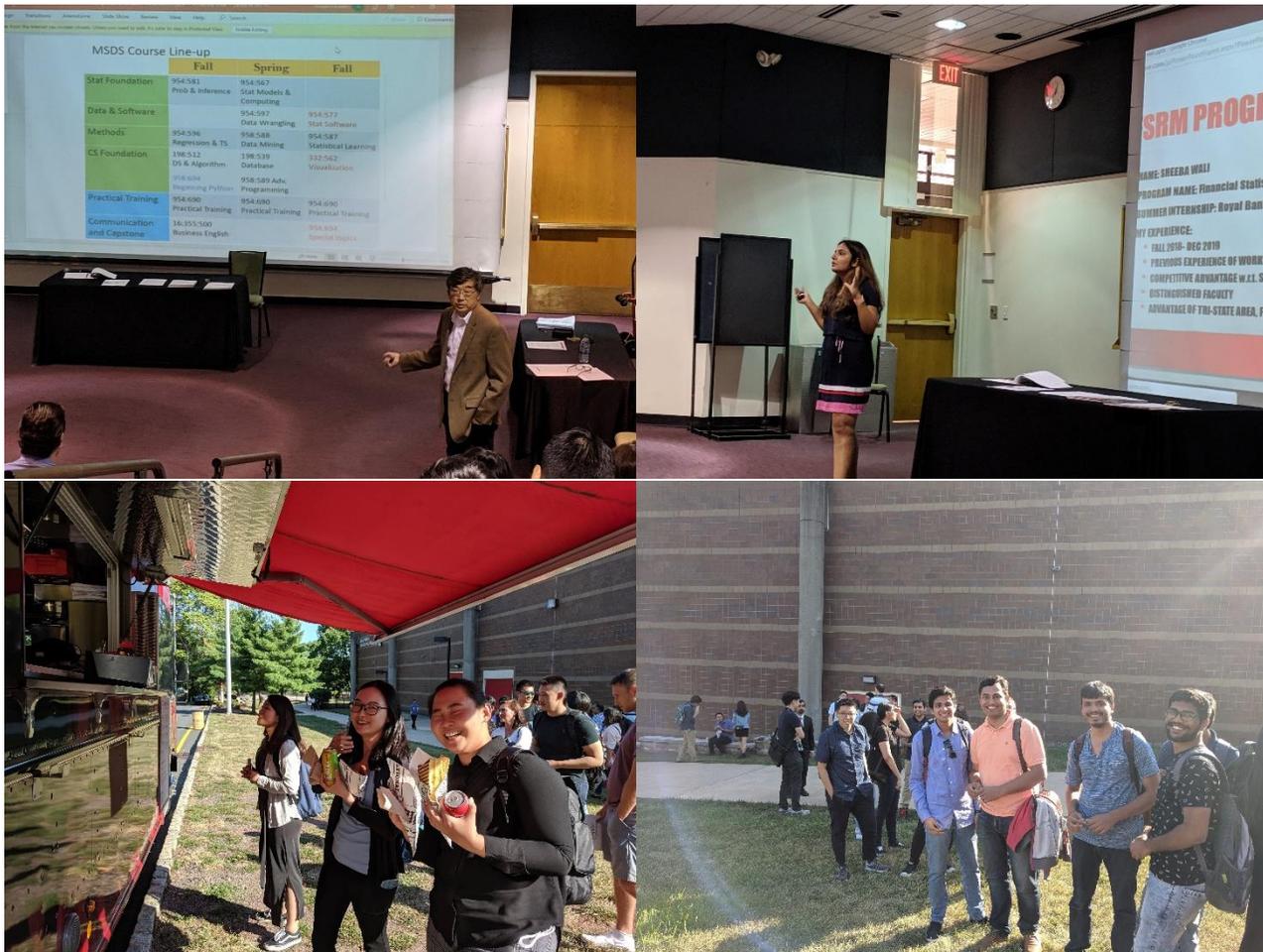
Giving real world and market examples, Satish showed ways in which the normal distribution is actually a poor description of how the world works. Explaining financial markets and their microstructure, Satish tackled questions such as

Why do crashes happen? and Why is there illiquidity in the most well-traded stocks at sometimes? He explained how markets are very dynamic and never really in equilibrium. He summarized by explaining that “Once something can go wrong but only improbably so, dependencies will build up that will directly cause the probability to rise, so that the previously improbable thing will definitely happen and will have catastrophic consequences”.



Kelly Ye - “The Art and Science of Hedge Fund Replication” Kelly Ye, CFA, Director of Research at **IndexIQ**, the ETF platform for **New York Life Investments** gave an overview of the hedge fund replication problem, its history, validity and the science behind hedge fund replication algorithms.

Class of 2021 Orientation



Nearly 20 incoming FSRM students joined students from the MSDS program in a joint orientation for the incoming cohorts of the class of 2021. Orientation covered an academic course overview, professional development overview and presentations from various support services around the university including University Career Services, Global Services and Library services, among others. Several second-year students shared their experience with the program and described what they did over the summer in their internships. Orientation day ended with an outdoors picnic where students, faculty and staff mingled over food and snacks.

Bloomberg Terminal Training at Bloomberg LP HQ in NYC



As it has been customary every Fall, the FSRM program went on the road for an onsite visit to Bloomberg LP in New York City for a hands-on training session on Bloomberg terminals. 14 FSRM students made the trip and were joined by Mr. Joseph Libretti and Mohannad Aama. A highlight of the trip was meeting FSRM alumna Tlyn Washington who works at Bloomberg.

Alumni Profile

Tlyn Washington (FSRM 2017) is a Senior Data Analyst at Bloomberg LP. She is a graduate of Bloomfield College with a degree in Applied Mathematics.



Tell us about you and what you have been doing since graduating?

I am a senior data analyst within the Global Data Analytics team at Bloomberg LP. Currently, I am stationed at the Princeton office with multiple responsibilities including business intelligence, new-hire training, and global economic support management, just to name a few. As successful as I have become in my role today, it was not as easy as it seemed. Since graduation and before this position, I worked for multiple, unfulfilling employers who took advantage of my education and innocence but did not reinvest in my efforts to learn and improve. It took a few jobs and mentors to eventually understand my worth. To this day, I mentor students and young professionals to avoid the same struggles I experienced in my own career growth.

Which professor or class impacted you the most while you were at Rutgers FSRM and why?

I absolutely despised all of my theory courses, even though the professors tried their best to teach me. These were my greatest tribulations and the worst parts of my time in the program as well as my life. I have struggled to grasp concepts before this program and with a little extra effort, I was able to conquer it on my own, but this was nothing I had ever experienced. I was completely dependent on not only my own work ethic, but those of my classmates and professors. It was so bad that I was afraid I wouldn't graduate, let alone be a high performing student like I'd always been. Despite the tribulations, I did survive the program and finished as a more determined student of life. We will all reach an extremely low point in our lives and have to find a way to make it through. Without that experience, much of my success today would not exist. Programming in Java and R and foundations of FSRM were also the most practical courses we had, which I greatly appreciated as it kept my GPA afloat and was most applicable to my career.

What do you think is the must-have skill today for someone in your role in your industry?

Python, Java, SQL, and other coding languages are an amazing asset to have, but they will not be as powerful if you do not possess the skills to communicate the needs. Engineers can code and managers can lead, but the most effective (and highly paid) person, is the one that can do both. You do not have to master every coding language but you should be able to understand the logic and limitations of it. Project management and presentation skills are essential for finance jobs in America as those who are silent are easily overlooked and forgotten. It is important to build your brand and showcase your accomplishments or contributions to the company. This is how you gain opportunities for better projects in the future.

What advice do you have for current and prospective FSRM students?

1. Understand your value and worth. Review your skill set with a trusted mentor so your career path is effective with minimal learning curves.
2. Do not fear the worst life has to offer. We must all struggle in order to grow so do not be afraid to ask questions, seek help, or challenge the status quo. This will not only enhance your confidence but also your chances of success.
3. Lastly, practical courses like foundations of an industry or programming can be effective but don't forget about the soft skills. The soft skills are what help you in the interviews and in upscaling your career.

Student Profiles

Xinyu Wei is a second-year student graduating in May 2020. She is a graduate of Xi'an Jiaotong University in China with a degree in Mathematics and Applied Mathematics. While pursuing the FSRM degree at Rutgers she held a summer internship with Guggenheim Partners as a Quant Risk intern.

1. Where are you headed after graduation?

I will be working as a risk analyst at Guggenheim Partners in their Risk Management team in New York.

2. What was your favorite class and why?

My favorite class is Regression Analysis given by Professor Rong Chen. The knowledge in this course is very helpful in interviews and on the job.



3. If you could use two or three words to describe your FSRM experience, what would they be?

I would choose “a good start”. FSRM helped me adapt to life in the U.S. and start my career in finance.

4. What have you learned that you think will help you most in your career?

I think it must be focusing on developing and using my strengths. This is what Mr. Libretti and Mr. Aama always told us in the past. Self-improvement and using our strengths can make us stand out.

5. What is your favorite Rutgers memory?

I think it is studying in the lab with friends. I met my best friend at Rutgers and I'll never, ever forget that.

6. What advice do you have for current and prospective MSDS students?

I think the part which makes FSRM special is the career services. I would suggest every FSRM student to talk with Mr. Libretti and Mr. Aama frequently, keep learning and try each posted job opportunity.

Latest News

-After founding the FSRM Program and being its founding Director, Professor Rong Chen will be transitioning to the position of Chair of the Department of Statistics effective July 1 2020. FSRM will have 2 Co-Directors: Professor Cun-Hui Zhang and Professor Sijian Wang who were featured in this issue.

-The Rutgers MS in Financial Statistics & Risk Management (FSRM) program was ranked among the top 25 global quantitative finance programs by Risk.net in its 2020 rankings.

<https://go.rutgers.edu/rfmugitc>

-Rutgers is the top visited university in 2019 by Goldman Sachs' [recruiters according to eFinancialCareers](#). Goldman's recruiters visited Rutgers nine times, likely because it combines the virtues of being close to Goldman's New York City headquarters and its growing New Jersey office.

-Please join the FSRM alumni private group on LinkedIn here:

<https://www.linkedin.com/groups/4240269/>

-Follow the FSRM program's social media feeds:

Twitter <https://twitter.com/RutgersFSRM>

LinkedIn <https://www.linkedin.com/showcase/rutgers-ms-financial-statistics-risk-management/>

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